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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/760,884	01/17/2001	Panayotis C. Andricacos	YOR20000578US1	4972

7590 03/19/2004

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EXAMINER

MUTSCHLER, BRIAN L

ART UNIT	PAPER NUMBER
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1753

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action**Application No.**

09/760,884

Applicant(s)

ANDRICACOS ET AL.

Examiner

Brian L. Mutschler

Art Unit

1753

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 09 February 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 - (b) ☐ they raise the issue of new matter (see Note below);
 - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: _____.

Claim(s) objected to: _____.

Claim(s) rejected: 10-22, 29 and 30.

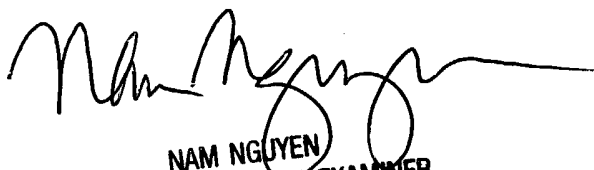
Claim(s) withdrawn from consideration: _____.

8. ☐ The drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____.
10. ☐ Other: _____

Continuation of 5. does NOT place the application in condition for allowance because: Applicant's arguments have been considered but are not persuasive. Applicant argues that "Chen does not teach a successful method [of electroplating copper directly onto a barrier layer]" (see page 5 of Applicant's response). First, Chen expressly teaches, "In accordance with the invention, an alkaline electrolytic copper bath is used ... to electroplate copper directly onto a barrier layer material" (see page 7, lines 3-7). Second, even when other methods are used to deposit a first seed layer, the seed layer repair process electroplates directly on areas not covered by the initial deposition (see Figures 2B and 2C). Applicant further argues that Landau and Chen are "mutually inoperable" because "Landau discloses a plating solution containing up to 0.2 M sulfuric acid, whereas Chen discloses a plating solution having a pH of 5-13 and preferably at least 9.5" (see page 6 of Applicant's response). This argument is not persuasive because it inaccurately reflects the teachings of Landau. Landau teaches that "a high acid concentration is detrimental to deposition uniformity" and that "a lower acidic concentration minimizes harmful corrosion and material stability problems" (see col. 17, line 57 to col. 18, line 16). Landau further teaches that "the invention contemplates an electroplating solution having no acid or very low acid concentrations" (see col. 18, lines 12-16). Therefore, the teachings of Landau are in agreement with the teachings of Chen, which teaches the use of alkaline solutions.

Regarding the rejection of claims 15 and 21-23 over Ting, Applicant relies on the arguments addressed above.

Regarding the rejection of claims 15 and 21-23 over Gilton and Woo, the rejection was inadvertently maintained in the rejection mailed October 9, 2003, and has no bearing on the current status of the claims.


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